Operating Instructions

STEREO CD CASSETTE DECK RECEIVER

XR-P500

SPEAKER SYSTEM

S-P500/S-P500D

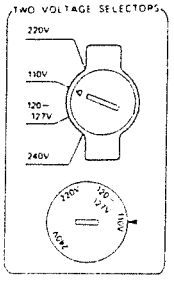
COMPACT disc DIGITAL AUDIO

Thank you for buying this PIONEER product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

LINE VOLTAGE SELECTOR SWITCHES

Only multi voltage models are provided with these switches, U.S., Canadian, U.K., Australian and Europe models are not provided with this switch.
Mains voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.
Before your model is shipped from the factory, these switches are set to the power requirements of the destination; nevertheless, you should check that they are set properly before plugging the power cord into the wall outlet.

1. Disconnect the power cord.
2. Use a medium-size screwdriver.
3. Insert the screwdriver into the groove on the voltage selectors and adjust so that the tip of the arrow points to the voltage value of your area.



The model S-P500 is not sold in the U.S.A. and Canada.

"This product complies with the Radio Interference requirements of the EC (European Community) Directive 87/308/EEC."

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel.
Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

CAUTION [FOR U.S. MODEL]

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

CONTENTS

BEFORE OPERATING 7
REAR PANEL FACILITIES 8
CONNECTIONS 9
ANTENNA CONNECTIONS 10
FRONT PANEL FACILITIES 11
REMOTE CONTROL UNIT FACILITIES 14
OPERATIONS 15
TUNING INTO STATIONS 15
MEMORIZING STATIONS 16
CAUTIONS REGARDING COMPACT DISC HANDLING 16
LISTENING TO COMPACT DISC 18
HOW TO HANDLE CASSETTE TAPES 21
LISTENING TO TAPE 22
RECORDING ONTO A TAPE 22
A.S.E.S. (Auto Synchro Editing System) 24
CHANGING DISPLAYS 25
ADJUSTING THE SOUND (SOUND CHARACTER) 26
MEMORIZING YOUR USUAL LISTENING SETTINGS (SMART OPERATION) 26
TIMER PLAYBACK 26
SLEEP TIMER 27
TIMER RECORDING 28
MAINTENANCE 29
TROUBLESHOOTING 30
SPECIFICATIONS 32

PIONEER
The future of sound and vision.

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off.

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Equipment sold in the U.K. is not supplied with a power plug.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS – The operating instrucions should be retained for future reference.

HEED WARNING – All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

WATER AND MOISTURE – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION – The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING – The appliance should not be mounted to a wall or ceiling.

VENTILATION – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION – If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES – An outdoor antenna should be located away from power lines.

NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and inquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE – The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; on the enclosure damaged.

SERVICING – The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GRAUNDING – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC NATIONAL ELECTRIC CODE

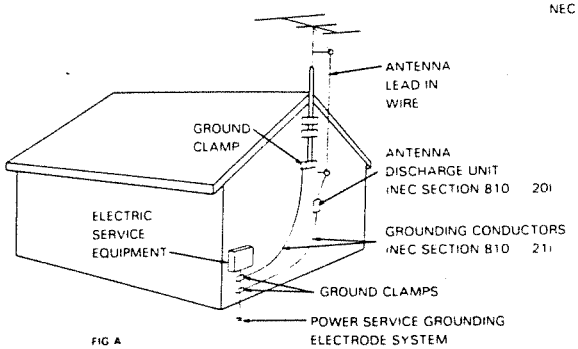
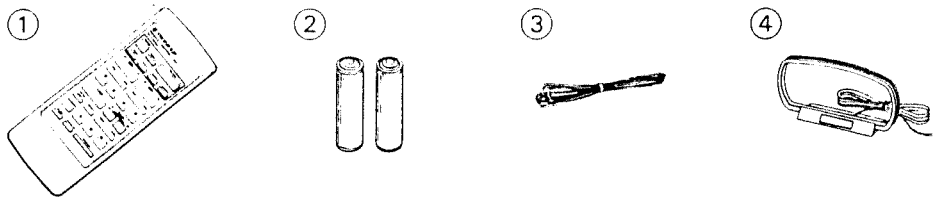
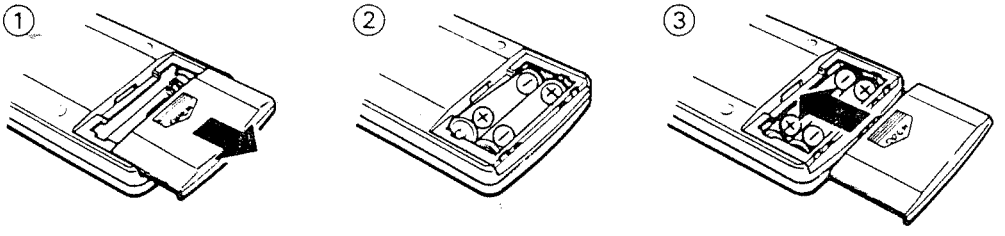


FIG A

1



2



3

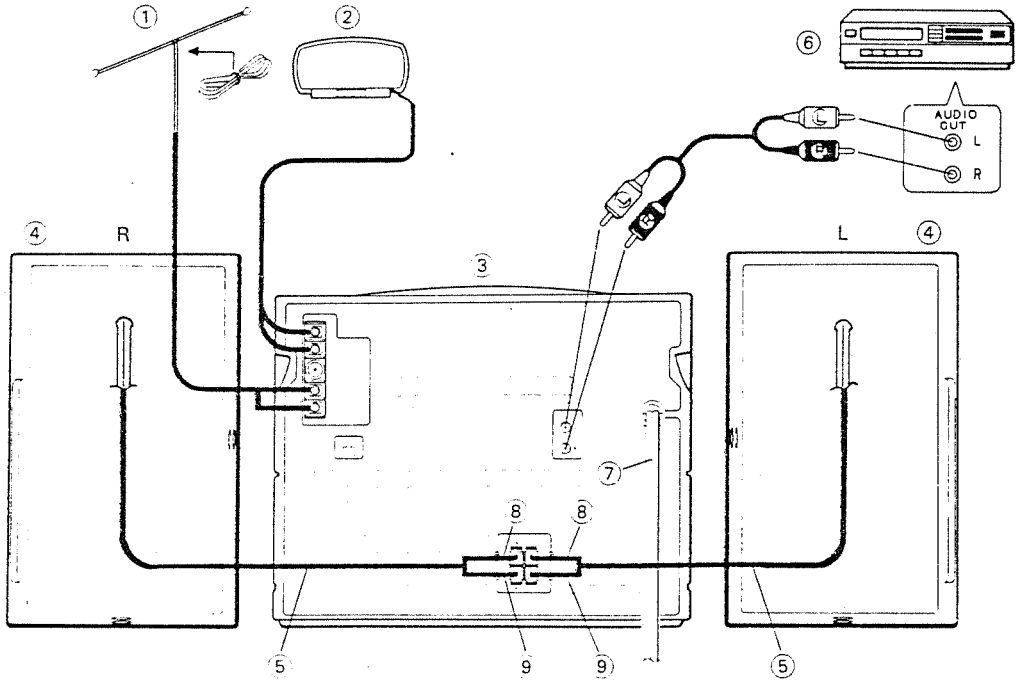
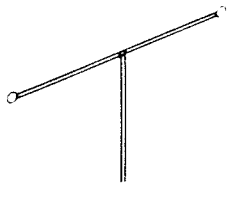
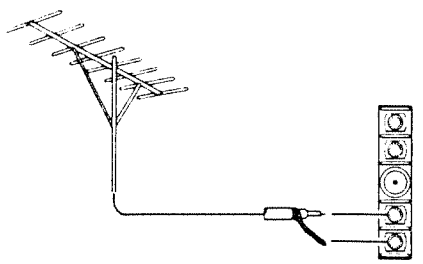


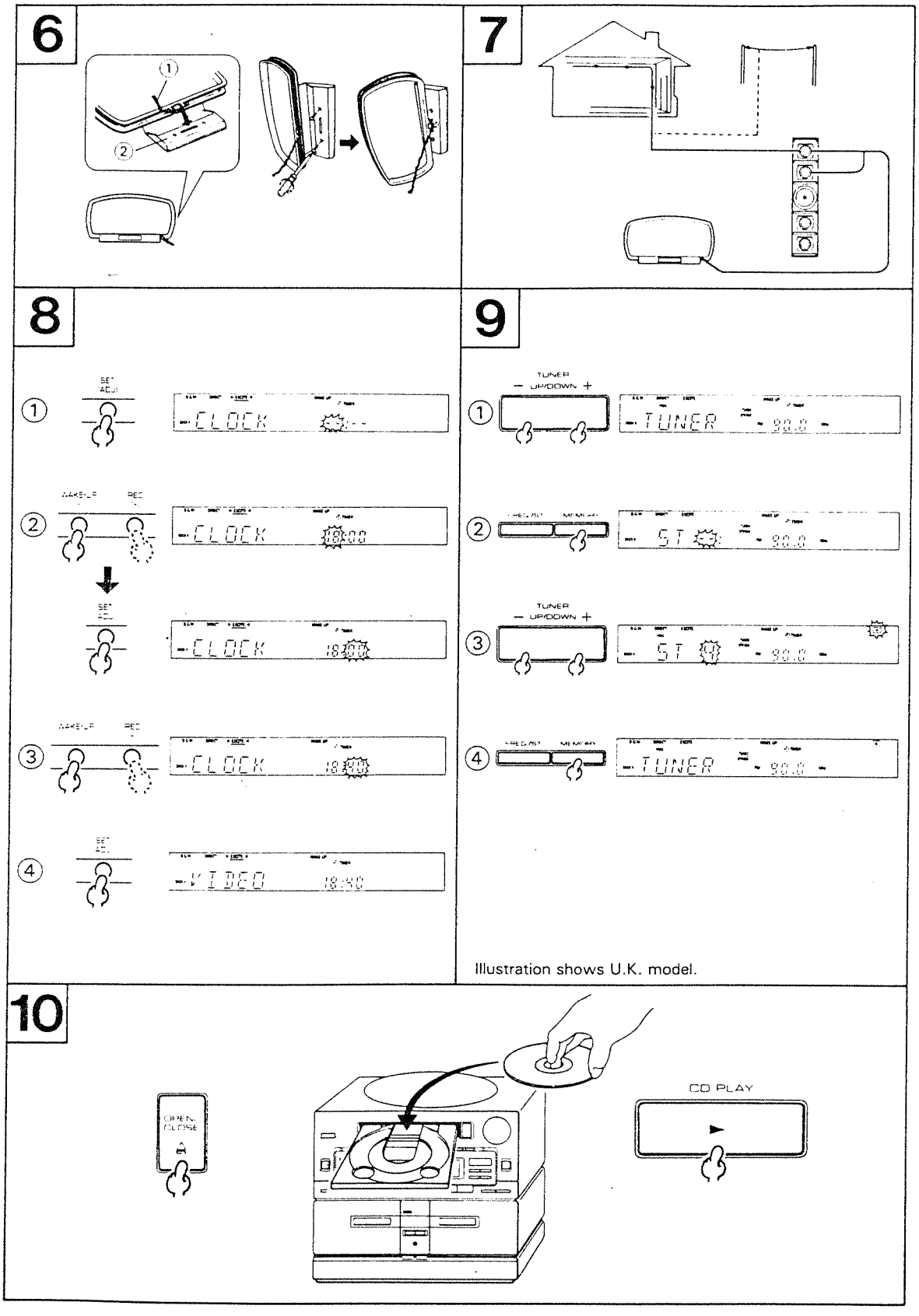
Illustration shows U.K. model.

4



5




6
7
8
9
10
CLOCK
TUNER
ST
VIDEO
CD PLAY
Illustration shows U.K. model.

11

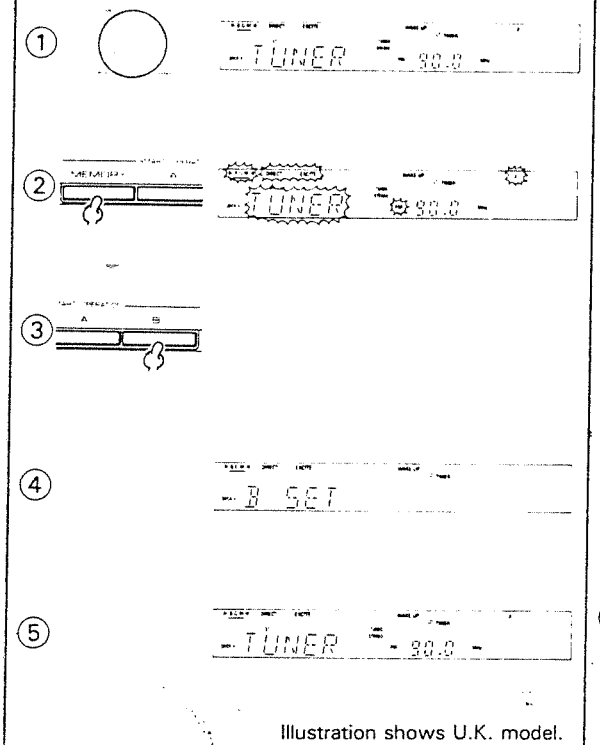


Illustration shows U.K. model.

12

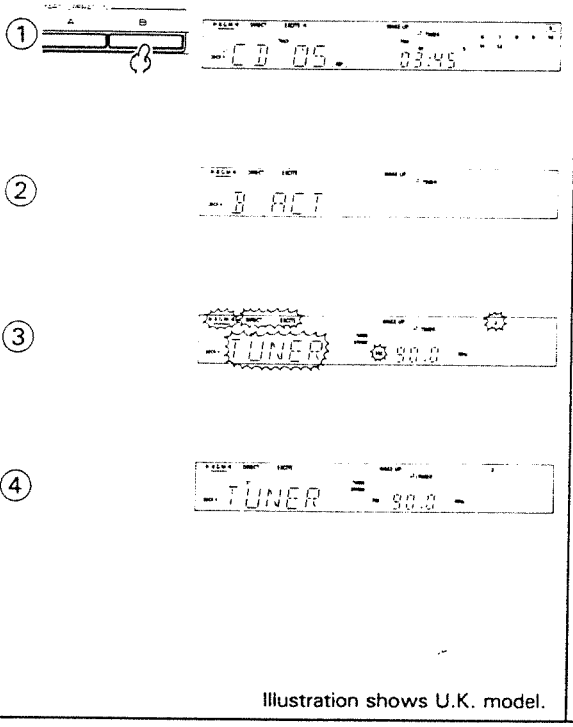
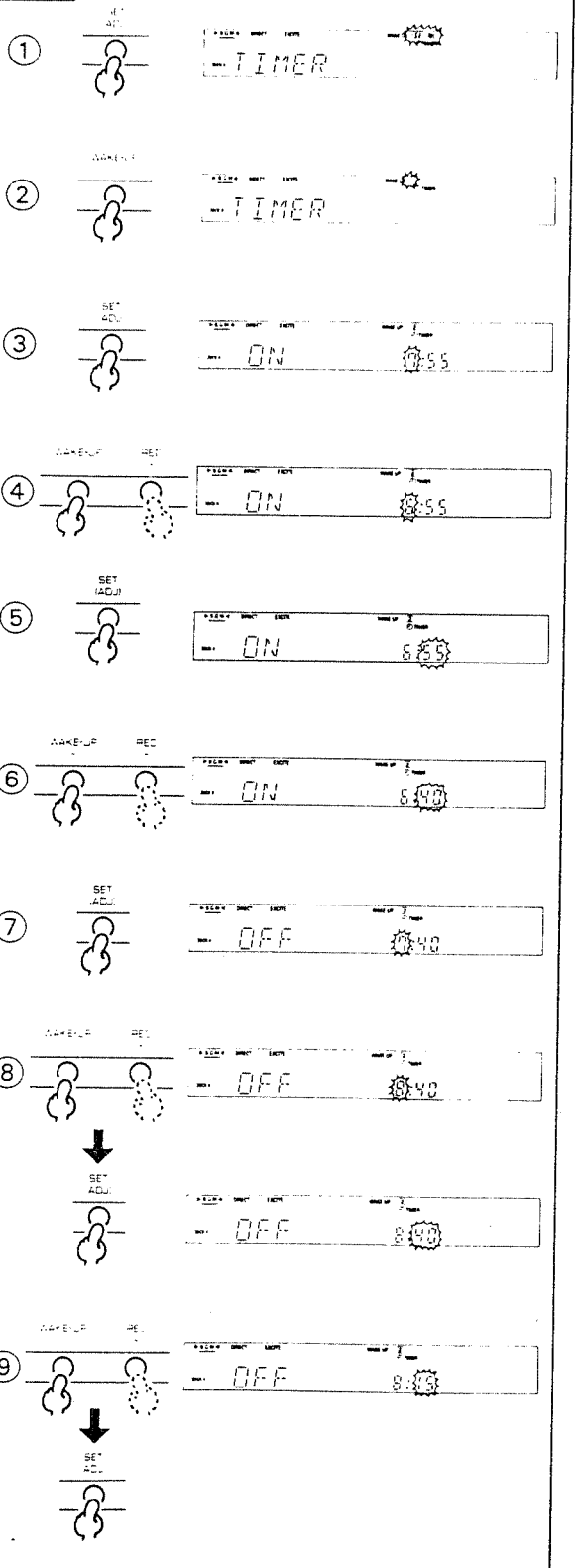
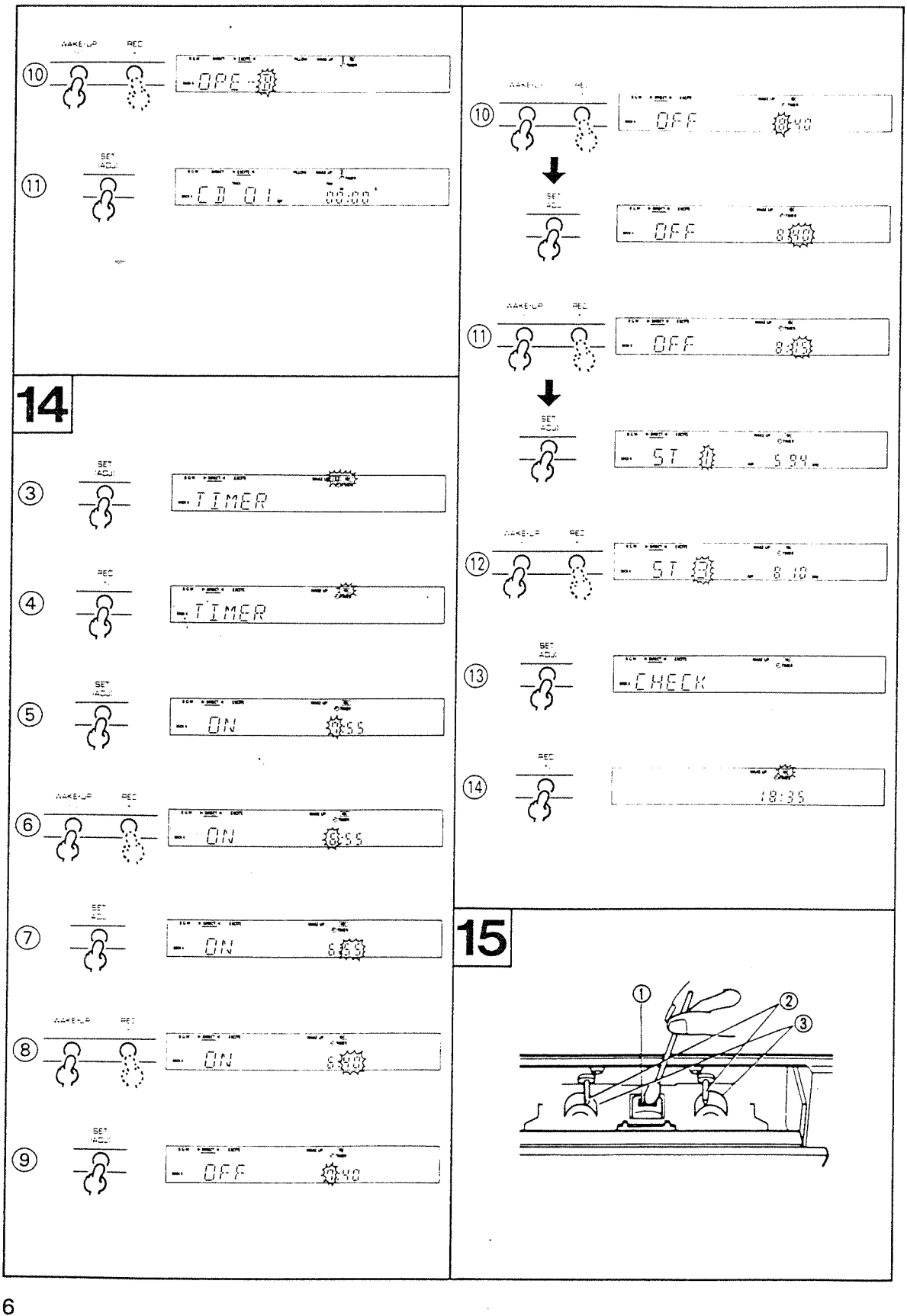


Illustration shows U.K. model.

13




14
15
WAKE-UP
REC
SET ADJ
OPE
CD 01
00:00
OFF
8:40
8:45
ST
5:54
8:10
CHECK
18:35
TIMER
ON
5:55
6:55
6:55
6:50
OFF
6:40
1
2
3

[FOR EUROPEAN AND U.K. MODELS]

CAUTION

This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

The following caution label appears on your unit.

Location: rear of the unit.

BEFORE OPERATING

CONFIRM SUPPLIED ACCESSORIES (See page 3, Fig. [1])

① Remote control unit
② Size "AAA" (R03/UM-4) batteries
③ FM T-type antenna
④ AM loop antenna

LOADING BATTERIES INTO REMOTE CONTROL UNIT (See page 3, Fig. [2])

① Open the rear cover.
② Install size "AAA" (IEC R03/UM-4) batteries correctly matching polarity.
③ Close the cover.

Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

A:
Always insert batteries into the battery compartment correctly matching the positive + and negative − polarities, as indicated inside the compartment.
B:
Never mix new and used batteries.
C:
Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

NOTE:

- *If the remote control unit will not be used for a long time (1 month or more), remove the batteries to avoid battery leakage. If fluid should ever leak from batteries, wipe away the fluid and then install new batteries.*
- *Do not put books etc. on top of the remote control unit. If keys are continuously depressed, the batteries will run down.*
- *If the operating range decreases, the batteries have probably run down. Please replace with new batteries.*

LOCATION

Install the unit in a well ventilated location where it will not be exposed to high temperature or humidity.
Do not install the unit in a location which is exposed to direct rays of the sun, or near to hot appliances or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the unit in a damp or dusty environment may result in malfunction or accident. (Also avoid installation near cookers etc., where the unit may be exposed to smoke from oil, steam or heat.)

PRECAUTIONS REGARDING INSTALLATION

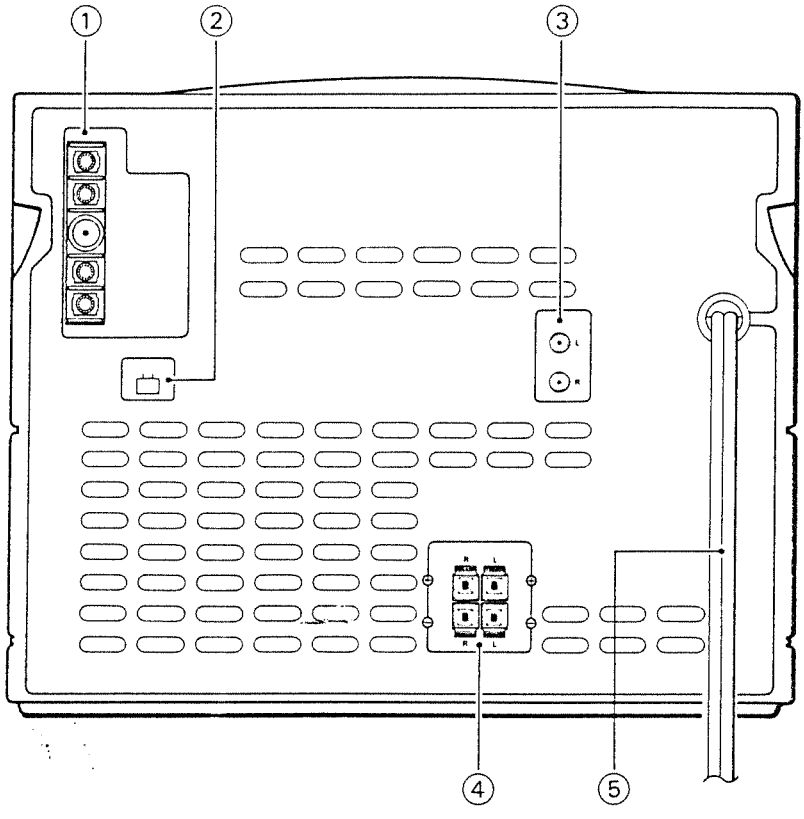
- Placing and using the unit for long periods on heat-generating sources will affect performance. Avoid placing the unit on heat-generating sources.
- Install the unit as far away as possible from a TV. Installation in close proximity to such equipment may cause noise or degradation of the picture. Such noise may be particularly noticeable when an indoor antenna is used. In such a case, make use of an outdoor antenna, or turn off power to the unit.

CONDENSATION

When the unit is brought into a warm room from previously cold conditions or when the room temperature is suddenly increased, condensation may form inside and the unit may not be able to attain its full performance. In cases like this, allow the unit to stand for about an hour or raise the room temperature gradually.

REAR PANEL FACILITIES

Illustration shows U.K. model.



① FM/AM ANTENNA terminals

Antennas must be connected to these terminals, otherwise you will be unable to receive broadcast signals. See page 9 and 10 for details on ANTENNA CONNECTIONS.

② BEAT CUT switch

Set to the position that gives the least noise when recording AM broadcasts, or when noise is recorded when making tape copies during reception of AM broadcasts.

③ VIDEO AUDIO IN jacks

Connect to audio output jacks of LD player or VCR, etc.

④ SPEAKERS terminals

L: Connect the left speaker system (left as seen from the listening position).

R: Connect the right speaker system (right as seen from the listening position).

NOTE:

Connect a speaker system having a nominal impedance ranging from 8 Ω to 16 Ω.

⑤ Power cord

Connect this to the AC wall socket.

CONNECTIONS

(See page 3, Fig. [3])

1. FM T-type antenna
2. AM loop antenna
3. XR-P500
4. Speaker
5. Speaker cord
6. Video cassette recorder, etc.
7. Power cord
8. Red
9. Black

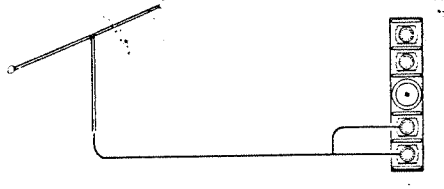
IMPORTANT

- Plug the power cord into the AC wall socket only after all the connections have been completed.
- Be sure to connect an antenna. If you don't, broadcast signal reception will not be possible.
- Insert the plugs securely into the jacks. Improper connection can lead to sound distortion or malfunction.

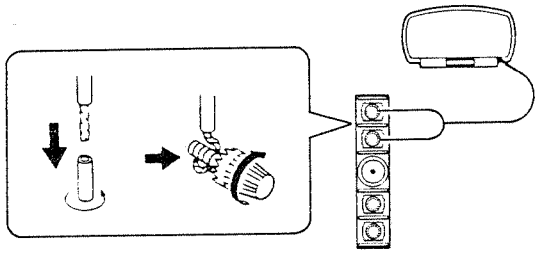
Proceed as follows with the connections

1. Connect the FM T-type antenna ① and AM loop antenna ② to the unit's ANTENNA terminals.

[FM T-type antenna connection]



[AM loop antenna connection]



2. Use "VIDEO" jacks for connection to the audio output jacks of a video disc player or video cassette recorder.

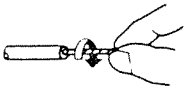
NOTE:
The white plug is for the left channel connection and the red plug for the right channel connection.

3. Connect the speaker cords ⑤ to SPEAKERS terminals.

Connect the "+" terminals on the unit to the "+" terminals on the speakers, the "–" terminals on the unit to the "–" terminals on the speakers.

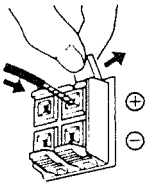
Connecting the speaker cords.

1.

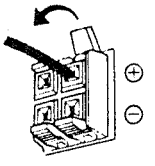


Twist the strands.

2. Push away.



3. Pull back.



NOTE:
Do not allow the conductors of the cords to project out of the terminals or to come into contact with other conductors. A breakdown or failure may occur when conductors touch.

Speaker impedance
Connect speaker systems with a nominal impedance of ranging from 8 to 16 Ω.

4. Finally, connect the power cord ⑦ to the AC wall socket.

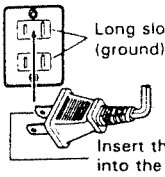
POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

CONNECTING THE POWER CORD (For U.S. and Canadian models)

Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.

Household electrical outlets



ANTENNA CONNECTIONS

Radio reception is not possible unless the antenna is properly connected.

The strength of broadcast signals varies from one area to another. Signal propagation is especially poor in metropolitan areas, where there are many tall buildings, and in mountainous areas. Proper antenna installation is vital to good reception.

FM ANTENNA

FM Antenna Attachment (Page 3, diagram [4])

Connect the accessory FM antenna to the FM terminals. Stretch the antenna out to its full "T" shape, and affix it to a wall, etc.

External FM antenna installation (Page 3, diagram [5])

Use an external antenna when the signals from the station are weak and cannot be picked up by the accessory FM antenna, or when the sound heard is accompanied by large amounts of noise.

If the FM antenna terminal is not a PAL terminal, then connect as in figure [5] if using a 75 Ω coaxial cable.

AM ANTENNA

The AM loop antenna supplied with the tuner should be connected to the AM antenna terminals. The antenna should be placed at a distance from the tuner, and should not be allowed to touch metallic objects. Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.

Setting Up the AM Antenna (Page 4, diagram [6])

- Insert the clip on the bottom of the antenna into the groove on the leg.
- Place the antenna on a level surface and rotate it to find the orientation that yields the best reception.
- To permanently fix the antenna, screw the leg to a wall or something similar before assembling. (Fixing the antenna in the direction that allows for the best reception).

① lead wire ② leg

External AM antenna (Page 4, diagram [7])

Indoor AM antenna

Provide a vinyl-coated wire (5 to 6 meters long). Secure one end to the AM terminal and the other end to a wall or other high location.

Outdoor AM antenna

If reception is still poor even when a lead antenna has been fully extended indoors, stretch out a vinyl-coated wire and secure it outdoors.

NOTE:

Do not detach the AM loop antenna when using the external AM antenna.

FM/AM CHANNEL STEP SWITCH

This switch is not provided on models for Europe or U.K. Adjustment is only necessary when there is a CHANNEL STEP switch at the rear panel.

The CHANNEL STEP switch is located on the rear panel of the stereo CD cassette deck receiver. Before the tuner leaves the factory, this switch is set to the channel step standard of the areas where the tuner is sold.

Depending on the position of this switch, each time TUNING switch is pressed, the frequency display changes by the following amount:

[100 kHz/10 kHz] position

For areas with channel step of 100 kHz for FM and 10 kHz for AM.

[50 kHz/9 kHz] position

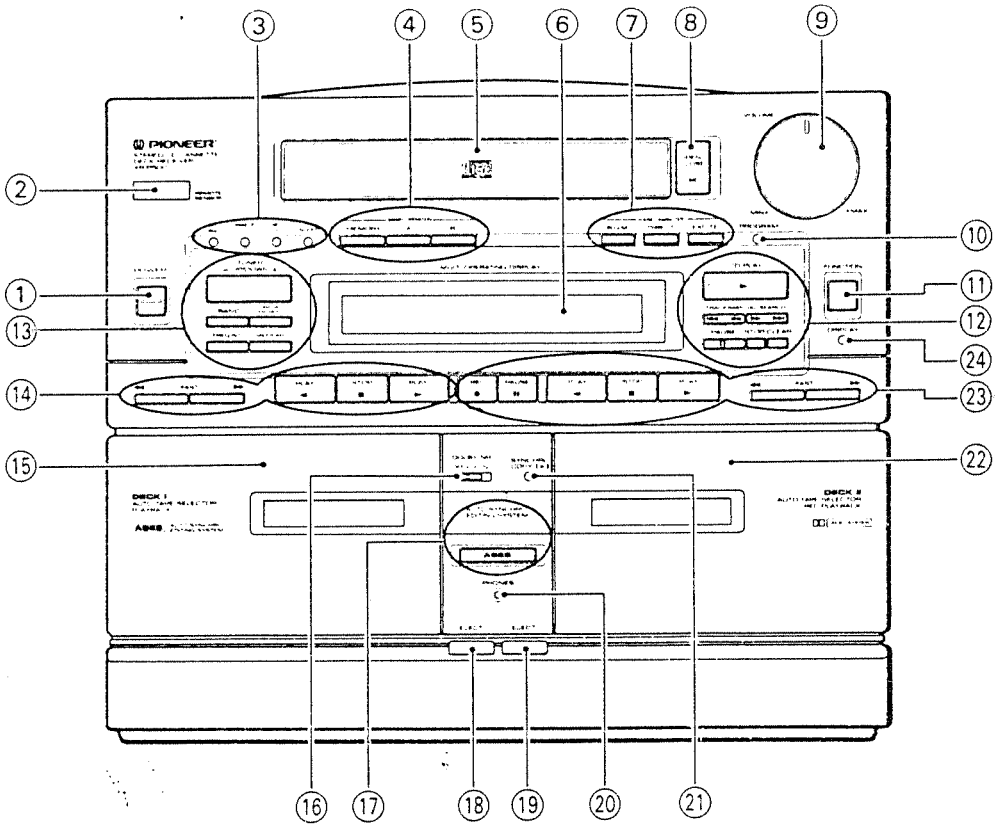
For areas with channel step of 50 kHz for FM and 9 kHz for AM.

NOTE:

- *If the switch is set to the wrong position, correct turning may not be possible.*

Consult your dealer if you are not sure about the radio channel step standard in your area.

FRONT PANEL FACILITIES



① POWER STANDBY/ON switch

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.
The unit is on STANDBY when the display section indicates only the time.

② REMOTE SENSOR window

③ Timer operation switches

SET (ADJ):
Used for starting the clock adjustment (ADJ function).
Used for current time, timer playback and timer recording (SET function).

WAKE UP (–):
Used for timer playback setting (WAKE UP function).
Used for adjusting the clock, timer settings and its related adjustment ("–" function).

REC (+):
Used for timer recording setting (REC function).
Used for adjusting the clock, timer settings and its related adjustment ("+" function).

SLEEP:
Used for the sleep timer setting.

④ SMART OPERATION switches

Use these to memorize and recall your usual listening settings (function, SOUND CHARACTER, volume, etc.)

MEMORY: Use to memorize your favorite settings.

A, B: Use to memorize and recall your favorite settings.

⑤ CD disc tray

⑥ Display

⑦ SOUND CHARACTER switches

Recall just the sound you want by operating a switch.

B.G.M.: This gives you a wide sound with lowered bass and treble response.

DIRECT: This lets you listen to sound coming directly from the source by switching all sound adjusting circuitry off.

EXCITE: Use this to boost bass and treble for a powerful, more dynamic sound.

⑧ OPEN/CLOSE (⏏) switch

Press when you wish to eject or load a disc. Each time the switch is pressed, the tray is alternately pushed out or pulled in.

⑨ VOLUME control

⑩ PROGRAM switch

This is used for programming tracks to play in a desired sequence.

⑪ FUNCTION switch

Use to select the component you want to play. Each time you press the switch, the component changes in the following order.

CD ——→ TUNER ——→ TAPE ——→ VIDEO

⑫ CD operation switches

► CD PLAY:
Press to begin CD playback, and to cancel the pause mode.
|◄◄, ►►| TRACK SEARCH/ ◄◄, ►► MANUAL SEARCH:
Press and release quickly, and it operates as the TRACK SEARCH function.
Continue pressing and it operates as the MANUAL SEARCH function.
II PAUSE:
Press to temporarily interrupt playback. When pressed again, the pause mode is cancelled and playback resumes.
■ STOP/CLEAR:
When you press it, play and all other operations stop. If you press it when it is in the STOP mode, the program is cleared from memory.

⑬ Tuner operation switches

TUNER UP (+)/DOWN (–):
Use to locate stations.
If you select the frequency mode with the FREQ./ST. switch, frequency changes up/down.
If you select station mode with the FREQ./ST. switch, station number changes up/down.
BAND:
Each time this switch is pressed, FM or AM reception is selected alternately.
AM NR/FM MONO:
When receiving an AM broadcast, this operates as a noise reduction (AM NR) switch.
If you are listening to an FM stereo broadcast that has a lot of noise, you can use this switch to reduce the noise by changing reception to monaural reception (FM MONO).
FREQ./ST.:
Use to change the operation mode of the TUNER UP/DOWN switch.
MEMORY:
Use to memorize stations.

⑭ DECK I operation switches

► PLAY (FWD)..... For playing back a tape in the forward mode.
◄ PLAY (REV)..... For playing back a tape in the reverse mode.
■ STOP..... For stopping the tape.
►► FAST..... Fast forward in forward mode, rewind in reverse mode.
◄◄ FAST..... Rewind in forward mode, fast forward in reverse mode.

⑮ DECK I cassette door

⑯ DOLBY* NR switch

Set this switch to the ON position to activate the DOLBY NR system.

- Tapes recorded using Dolby noise reduction should always be played back with the noise reduction system on. Sound quality will be adversely affected if played back with the system off, or if tapes recorded using a different noise reduction system are played back with the Dolby NR system on.
- It is recommended that tapes recorded with Dolby B type NR be so marked on the label. This will help prevent incorrect setting of the noise reduction switch during playback.

*
Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

⑰ ASES (Auto Synchro Editing System) switch/indicator.

Use to automatically record a CD on a cassette tape.
Press once to switch to the FULFILL mode. This assures that recording will continue until the tape is full.
Press twice to switch to the LINK mode. If the playing time of the disc is shorter than that of the tape, change the disc and resume recording.

⑱ DECK I EJECT switch

⑲ DECK II EJECT switch

⑳ PHONES (Headphones) jack

For stereo headphones.

NOTE:
There is no output from the speakers when headphones are plugged into PHONES jack.

㉑ SYNCHRO COPY (I ► II) switch

Used for tape copying.

㉒ DECK II cassette door

㉓ DECK II operation switches

► PLAY (FWD)..... For playing back a tape in the forward mode.
◄ PLAY (REV)..... For playing back a tape in the reverse mode.
■ STOP..... For stopping the tape.
►► FAST..... Fast forward in forward mode, rewind in reverse mode.
◄◄ FAST..... Rewind in forward mode, fast forward in reverse mode.

● REC/REC MUTE .. Press to set to recording standby mode. Press the PLAY switch (◄ or ►) to begin recording. If you press it while recording, it operates as a REC MUTE switch, preventing anything being recorded until you release it. Releasing it puts you in the REC PAUSE mode.

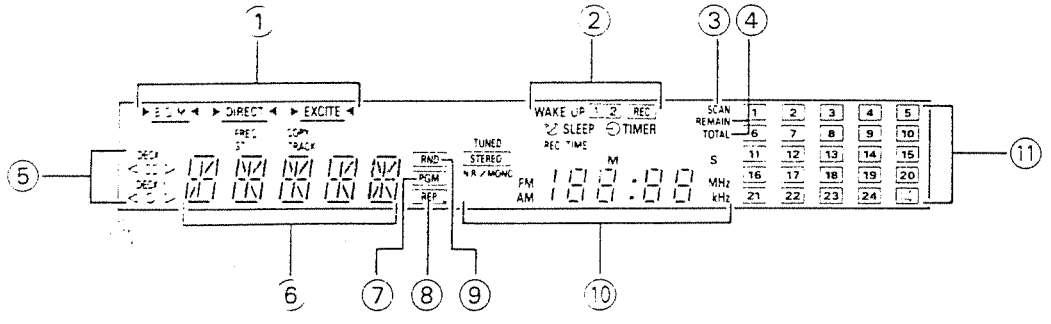
II PAUSE ..... Temporarily stops tape travel. Cancels pause mode when pressed again or press the PLAY switch.

24 DISPLAY switch

Use to switch between different display modes in the display section.

Display Section

• **Built-in Proper Bass Active Supply System**
This system provides a rich, deep bass sound, even with small speakers, by boosting the bass at the amp stage. (The bass is boosted even if SOUND CHARACTER is in the DIRECT position.)



1 Press one of the SOUND CHARACTER switches and it lights.

2 Displays timer settings.

3 Lights during SCAN operation.

4 Switched with the DISPLAY switch.

REMAIN: Displays the track number and the time remaining for the track being played. Press again and the time remaining for all the discs is displayed. During programmed play only the time remaining for the track being played is displayed.

TOTAL: This displays the total number of tracks and total time for a disc or program.

5 Displays operations on DECK I, DECK II and CD player.

6 Displays the function. In the TUNER mode, this displays the Station No., and when playing a CD it displays the track number. (During programmed play it displays the step number).

7 Indicates CD programmed play is in progress.

8 Indicates CD repeat play is in progress.

9 Indicates CD random play is in progress.

10 This lights during broadcast reception.

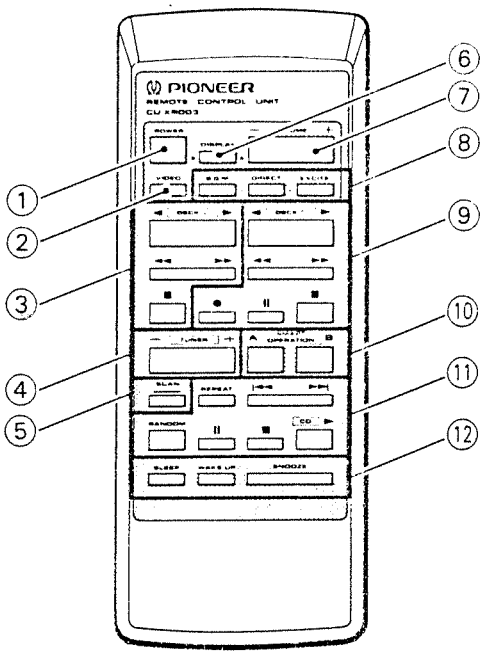
In the TUNER mode, frequency is displayed. At any other time it displays the time.

STEREO: Lights during stereo broadcast reception.

NR/MONO: During FM reception, this lights to indicate that the AM NR/FM MONO switch is operating, converting reception to monaural. During AM reception, this lights to indicate that the AM NR/FM MONO switch is operating and AM NR is ON.

11 When a CD is playing, this displays the track numbers for the remaining tracks. Any tracks after Track No.25 are displayed as →. During TUNER operation, this displays the station number.

REMOTE CONTROL UNIT FACILITIES



① POWER key

② VIDEO key
Sets function to VIDEO.

③ DECK I operation keys
These have the same functions as the main unit's DECK I operation switches ⑫. (refer to page 12)

④ TUNER (–, +) key
Press once to switch to the TUNER function. After that it recalls memorized station numbers.
+ ..... Stations change in order in the upward direction.
– ... Stations change in order in the downward direction.

⑤ SCAN key
- Press during broadcast reception, and stations memorized in station call will be received and change in order every three seconds. (memory scan). Press once more, and it stops operating.
- If you press this when the function is CD, and the CD player is in the STOP mode, it plays ten second sections of all tracks, about one minute into each track.
- If you press the SCAN key while a CD is playing, the elapsed time of the track playing is memorized, and then ten second sections of the following tracks are played in sequence from the memorized time.

⑥ DISPLAY key.
This changes the display section's display mode.

⑦ VOLUME –, + key
When pressed, VOLUME is actually moved by motor.

⑧ Sound character recall keys

⑨ DECK II operation keys
These have the same functions as the main unit's DECK II operation switches ㉓ (see page 12).

⑩ SMART OPERATION A, B keys.
Recalls smart operation memories A and B.

⑪ CD operation keys
RANDOM: Press to begin random playback.
►: Playback
|◄◄, ►►|: Track search
II: Pause
■: Stop
REPEAT: Press for all tracks repeat playback.

⑫ Timer operation keys
SLEEP:
Sets the sleep timer. Each time you press this key, the setting changes as shown here. The current setting is shown on the display section.
Power turns off when your set time has elapsed.

(AUTO) → 90 (Approx.90 minutes) → 60 (Approx.60 minutes) → 30 (Approx.30 minutes) → 00 (OFF) → (AUTO)

AUTO:
When recording and during tape playback, power switches OFF when the CD or tape finish.
If you press the SLEEP key during SLEEP operation, the display will show the time remaining till power turns off.
WAKE UP:
Timer playback setting/cancellation can be performed when the timer playback time has been set. This is shown in the display section.
SNOOZE:
Turns off power if pressed after timer playback begins. Timer playback begins again approx. 5 minutes later.

Range of remote control
When the remote control unit is pointed at the remote sensor window and any of its keys is pressed, XR-P500 can be operated by remote control.
Distance: Within a range of approx. 7 meters from the remote sensor window.
Angle: Within approx. 30 degrees from the center of the remote sensor window.
Remote control will not be possible if there is an obstacle between the remote control unit itself and the remote sensor window.
Performance of the remote control unit is adversely affected in the presence of strong fluorescent light. Keep such lights away, especially from the sensor window.

OPERATIONS

Switch numbers used in the following explanation refer to the numbers appearing in the FRONT PANEL FACILITIES or REMOTE CONTROL UNIT FACILITIES section on pages 11 to 14.

SETTING THE CLOCK

- Set the clock when it has been incorrectly set, or when power has been cut to the unit.
- This clock provides 24 hour display.
- It cannot be operated by remote control.

(Example) Setting the clock to 18:40 (See page 4, Fig. [8])

Set by using the Timer operation switches ③.

1. Press SET (ADJ) switch.
   - When resetting, continue pressing for longer than five seconds.
   - When WAKE-UP [1], [2], or [REC] are lit, Timer Setting is not possible. Reset when the display goes out.
2. Use WAKE UP (–) and REC (+) switches to set the hour, then press SET (ADJ) switch.
3. Use WAKE UP (–) and REC (+) switches to set the minute.
4. Press SET (ADJ) switch when "00" seconds of that minute are reached for precise adjustment.

- After connecting to an AC outlet, be sure to set the present time. Timer playback and timer recording are not possible unless the time has been set.
- The time indication will appear as "--:--" if the AC power cord is unplugged. Be sure to set the time again upon reconnecting power.

PREPARATION

Press the POWER switch ① to turn on power.
Select the function with the FUNCTION switch ⑪.

Auto Function

This model is equipped with "auto function" operation, so when the switch for CD PLAY, PLAY (tape), or BAND + , – (UP/DOWN) is pressed, the function switches automatically. Use the FUNCTION switch ⑪ for VIDEO source selection since Auto Function is not effective for this.

NOTE:
Function can not be switched during recording. (Auto Function does not operate either.)

TUNING INTO STATIONS

Broadcast reception is not possible unless an antenna is connected, so be sure to connect one.

BASIC OPERATION

Operate by using the Tuner operation switches ⑬.

1. Use the FREQ./ST. switch to light the FREQ indicator in the display section.
2. Select the desired broadcasting band using the BAND switch.
3. Press TUNER UP (+) or DOWN (–) switch for higher or lower frequencies.

[Auto tuning]
Press TUNER UP (+) or DOWN (–) switch until the frequency starts to change (1 – 2 sec.), then release it. The tuner will automatically search for a broadcasting station, and stop when one is found, and the TUNED indicator lights up. To search for another station, press again.
- To interrupt auto tuning, press TUNER switch again.

NOTE:
When auto tuning is in use, reception may not be possible for distant stations or when signals are weak. At these times manual tuning is recommended.

[Manual tuning]
Press TUNER UP (+) or DOWN (–) switch and release quickly.
The tuning frequency will change by one step each time the switch is pressed. Press as many times as necessary to tune in the desired station. The TUNED indicator lights up when the station is tuned in best.
- If you keep the TUNER switch depressed after the frequency has begun to change, the reception frequency changes continuously, and stops when the switch is released.

The AM NR/FM MONO switch.

During AM reception: Cuts out AM broadcast noise to give you a much clearer sound.
During FM reception: This lets you switch between stereo and monaural modes when listening to a stereo broadcast. If there is a lot of noise in the stereo position, switch to MONO and the noise will be suppressed.

MEMORIZING STATIONS

Presetting

Operate using the tuner operation switches ⑪.
(See page 4, Fig. 9)
Up to 24 FM/AM stations can be memorized at random.

1. **Tune into the desired station.**
   Tune in according to the procedure in TUNING IN STATIONS.
   If the station is FM, then the current FM MONO mode setting is included in the memory.
   If the station is AM, then the current AM NR setting is included in the memory.
2. **Press MEMORY switch.**
3. **Display the station number to be memorized with the TUNER UP (+)/DOWN (–) switch.**
   Operate while the display is flashing (it flashes for about 5 seconds).
4. **Press MEMORY switch.**
   Operate while the display is flashing (it flashes for about 5 seconds).
   This completes memorization of one station. Use the same procedure to memorize up to 24 stations.

Station call

1. **Use the FREQ./ST. switch to light the ST indicator in the display section.**
2. **Select the station number you want to call with the TUNER UP (+)/DOWN (–) switch.**

NOTE:
The memorized station will be preserved for several days, even if the power cord is unplugged. If the memorized station has been erased, memorize it again.

Last station memory

The last received AM and FM stations remain stored despite function and/or POWER switching. To recall, use BAND selector switches.

Search for the station you want to listen to with the SCAN key (memory scan).

This function receives stations with memorized station numbers, and changes in order every three seconds.
It can only be operated with the remote control unit.

1. **Press the SCAN key ⑤ on the remote control unit during station reception.**
   Memory scan begins.
2. **Press the SCAN key ⑤ on the remote control unit again to stop operation.**
   The station being received at that time will continue to be received.

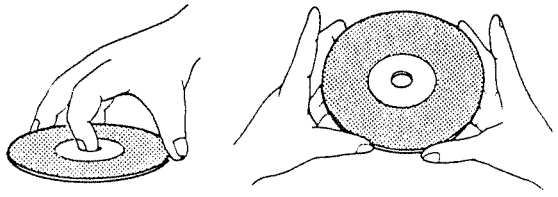
CAUTIONS REGARDING COMPACT DISC HANDLING

CARE OF DISCS

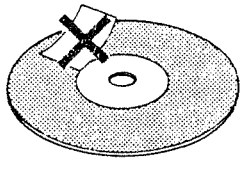
- With this player, use discs which display the mark shown below (optical audio digital discs).

COMPACT disc DIGITAL AUDIO

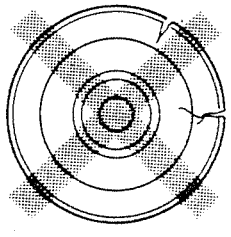
- When holding discs, do not touch their signal surfaces. Hold by the edges, or by one edge and the center hole.



- Do not affix gummed labels or tape to the label surfaces. Also, do not scratch or damage the label.

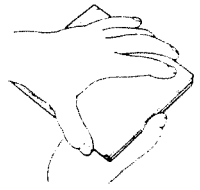


- Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.

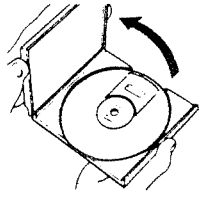


REMOVING FROM CASE

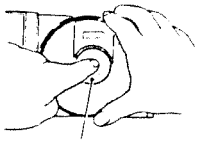
1. **Hold the bottom of case with your right hand, and the top with your left hand.**



2. **Open in the direction indicated by the arrow. The disc label will be facing up.**



3. Press the center holder with your left hand, and remove the disc with your right hand.

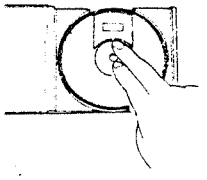


Center holder

4. Be careful not to touch the shiny, signal side of the disc.

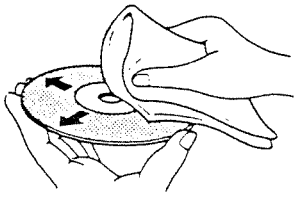
REPLACING THE DISC INTO CASE

Press from the top until the disc is firmly secured.

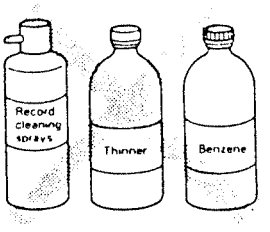


CLEANING DISCS

- The presence of fingerprints or smudges on the disc surface will not directly affect the recorded signals, but depending on the degree of contamination, the brightness of the light reflected from the signal surfaces may be reduced, causing degradation of sound quality.
  Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer periphery.



- If a disc becomes very dirty, dip a soft cloth in water and after wringing it out well, wipe the dirt away gently, and then remove any water drops with another soft dry cloth.
- Do not use record cleaning sprays or anti-static agents on discs. Also, never clean discs with benzene, thinner, or other volatile solvents, since damage to the disc surface may result.



STORING DISCS

- Discs are made of the same kind of plastic used for conventional analog audio records. Be careful not to allow discs to warp; always store discs in their cases vertically, avoiding locations with high heat or humidity, or extremely low temperatures. Avoid leaving discs in cars, since the seat of a car in direct sunlight can become unbelievably hot.
- Always read and follow the precautionary notes listed on disc labels.

LISTENING TO COMPACT DISC

OPERATIONS FOR NORMAL PLAYBACK

(See page 4, Fig [10])

1. Press OPEN/CLOSE (⏏) switch (8).
   The disc tray will be ejected forward.
2. Place a disc on the disc tray.

NOTE:

- *When setting an 8 cm CD, do not use the 8 cm CD adaptor.*
- *Make sure to place the disc on the tray with the label side up.*
- *Hold the disc so that you do not touch the playing side (the iridescent side) with your hands or fingers.*
- *If both 8 cm and 12 cm Discs are inserted and played simultaneously, the disc may be scratched or malfunction may result. Insert only one disc at a time.*

3. Press the OPEN/CLOSE (⏏) switch (8), or gently push the disc tray in with your fingers.
   Upon insertion of the disc tray, the total number of tracks on the disc and the total playback time will be displayed.
4. Press the CD PLAY (►) switch (12) and playback will begin.

NOTE:

- *If the function is CD, and you press the ► (CD PLAY) switch when there is no disc in the disc tray, the disc tray comes out. Load a disc into the tray, push the tray in, and play starts.*
- *The OPEN/CLOSE switch operates even when power is switched off. (It doesn't operate if the power plug is disconnected).*

Pause operation

Press PAUSE (II) switch (12).
To resume playback, press PLAY (►) or PAUSE (II) switch (12).

To stop playback

Press the STOP (■) switch (13), and playback stops.
Press the OPEN/CLOSE (⏏) switch (8), playback stops and the disc tray comes out.

TO SEARCH FOR A DESIRED TRACK (TRACK SEARCH)

During normal or programmed playback, or during the pause mode, these functions allow you to quickly find the beginning of a desired track.
Press and quickly release the TRACK SEARCH (|◄◄, ►►|)/ MANUAL SEARCH (◄◄, ►►) 12 switch. If you operate during pause, when search has finished, it is into the pause mode.

If you press the Track Search button too quickly, you may miss your desired track, so wait about 0.3 seconds before pressing again. If you do miss the track you are searching for, continue pressing the button until you find it.

To search for the next track

Press and quickly release the (►► /►►|) switch, and it will search for the beginning of the next track.
During programmed playback, it will search for the beginning of the next programmed track.
If you press the switch more than once, it will search for the track the same number of tracks ahead. For example, press it twice and it will search for the beginning of the track two tracks ahead.

To search for the previous track

Press and quickly release the (|◄◄/ ◄◄) switch to search for the beginning of the track playing at present.
If you press the switch more than once, it will search for the track the same number of tracks before. Press twice and it will search for beginning of the previous track.
During programmed play, it searches for the beginning of the previous programmed track.

If you operate TRACK SEARCH in the Stop mode and then press the CD PLAY (►) switch (12), play starts from the track specified in the display section.

FAST FORWARD AND FAST REVERSE (MANUAL SEARCH)

During play or pause modes, this function allows you to quickly advance or reverse through the disc to find a desired part.
Continue pressing the TRACK SEARCH (|◄◄, ►►|)/ MANUAL SEARCH (◄◄, ►►) switch (12). If you operate when in the Pause mode, there will be no sound during fast forward or fast reverse.

Fast Forward

Continue pressing the ►► /►►| switch for fast forward. When you stop pressing it, it will return to the mode you were in before pressing (Play or Pause).
If you fast forward to the end of the last track, End will be displayed in the display section, and the mode will change to Pause.
During programmed play, the mode changes to Pause at the end of the track.

Fast Reverse

Continue pressing the |◄◄/ ◄◄ switch for fast reverse. When you stop pressing it, you will return to the mode you were in before pressing (Play or Pause).
If you fast reverse to the beginning of the first track, normal play will resume.
During programmed play, if you fast reverse to the beginning of the track playing, play will resume from the beginning of that track.

OPERATIONS FOR REPEAT PLAY

- Operation is only possible with the remote control unit.
- During normal playback, all the tracks on the disc will be played back repeatedly (all tracks repeat.)
- During programmed playback, the tracks programmed will be played back repeatedly in the order programmed (programmed repeat).
- In the case of random play mode, after all the tracks have been played, random play will start again.

1. During CD play or in the stop mode, press the REPEAT key ⑪ on the remote control unit. (When in the stop mode, operate after switching the function to CD).

   The REP indicator lights in the display section.
   Press the PLAY ► key ⑪ or the CD PLAY (►) switch ⑫ on the main unit if you are in the stop mode.
   After all the tracks are played, repeat playback will begin. Playback will be repeated until repeat playback is canceled.

2. To stop repeat playback, press the REPEAT key ⑪ on the remote control unit.

   The REP indicator goes out and normal playback resumes.
   To stop playback, press the STOP (■) switch ⑫ or the ■ (STOP) key ⑪ on the remote control unit.
   Stopping playback also cancels the repeat mode.
   Press the OPEN/CLOSE (⏏) switch ⑧ to remove the disc.

TO PLAYBACK TRACKS IN A DESIRED ORDER (CD PROGRAMMED PLAYBACK)

With this function, you can playback the tracks on a disc in any desired order.
Programming should be performed in the stop mode.
Up to 20 program steps can be entered in a program.

Programming procedure

1. Switch the function to CD.
2. Select a track number with TRACK (|◄◄, ►►|)/MANUAL (◄◄, ►►) SEARCH ⑫ switch.

   Press the required number of times to display the track number you want to program.

3. Press PROGRAM switch ⑩.

   The selected track number is memorized.

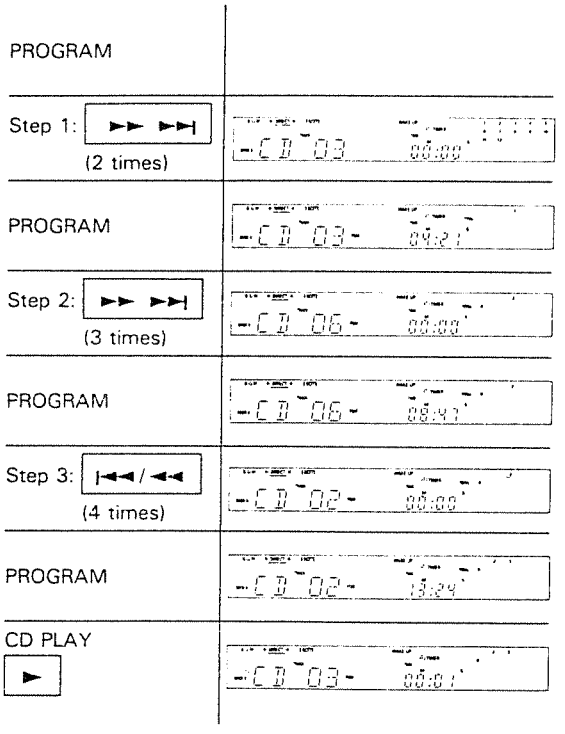
4. Repeat procedure 2 and 3.

   Each time you program a track, the number of the programmed track, and the total time are displayed in the display section.

5. Press CD PLAY (►) switch ⑫ to begin programmed playback.

   Programmed tracks will be repeated if you press REPEAT switch during program play (Programmed repeat).

[Operation example]
To playback track 3, track 6 and track 2.



[Pause program]
A pause operation can be programmed in place of a track number.
This is convenient when you want a pause to insert narration or to change the tape before proceeding.
Pause counts the same as one step.
For example, if your program order is track 3, track 6, Pause, track 2, during programmed play track 3 and track 6 will play, and then pause will operate at the beginning of track 2. Press the pause (II) switch ⑫ or the CD PLAY (►) switch ⑫ and track 2 will begin to play.

A pause cannot be programmed as the first programmed step. Two consecutive pauses also cannot be programmed.

[Cancellation of Programmed Playback and Clearing a Program]

- Pressing the OPEN/CLOSE (⏏) switch ⑧ will cause playback to stop and the program stored in memory will also be cleared.
- Pressing the STOP (■) switch ⑫ will cause playback to stop. In this case the program stored in memory will not be cleared. To clear the program, press the STOP (■) switch once more.

RANDOM PLAYBACK

Operation is only possible with the remote control unit. Each track of the disc will be played at random. After all the tracks have been played once, playback stops.

[To begin random playback]

Press the RANDOM key ⑪ on the remote control unit.

The random (RND) indicator will light.

[To stop random playback]

Press the STOP (■) switch ⑫ or ■ (STOP) key on the remote control unit.

Playback will stop and random playback operation will be canceled simultaneously.

Press the OPEN/CLOSE (⏏) switch ⑧ to remove the disc.

Hi-LITE SCAN

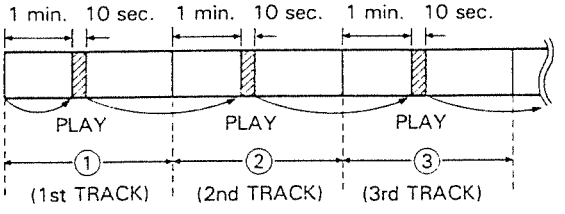
This plays ten second passages from each track on a CD, and is useful when searching for a particular track. Operation is only possible with the remote control unit.

(When the CD has stopped playing)

1. **Switch the function to CD.**
2. **Press the SCAN key ⑤ on the remote control unit.**

   Ten second passages after the first minute of play of each track are played in sequence.

   A ten second section is played from the beginning of a track if the track is less than one minute long.



3. **When you find a passage from the track you want to listen to, press the SCAN key ⑤ and play resumes from the beginning of that track.**

(During CD play)

The elapsed play time is memorized when the SCAN key is pressed, and ten second passages from all the remaining tracks are played at the memorized time. For example, if you press the SCAN key after 2 minutes 10 seconds of the first track, a ten second passage of all the remaining tracks will be played from the 2 minute 10 second position to the 2 minute 20 second position.

HOW TO HANDLE CASSETTE TAPES

Bear in mind the following points before loading cassette tapes.

Is the tape loose, or is some of the tape sticking outside the cassette?

If some of the tape is projecting outside the cassette shell or if it is loose, it may not feed between the capstan and pinch roller. This will prevent the tape from being transported or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack. (Fig. A) Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after having used the cassette.

What are the accidental erasure prevention tabs for?

A cassette is provided with these tabs so that important recordings will not be erased accidentally. When the tab (Fig. B) on the cassette shell is broken out with the tip of a screwdriver, it will not be possible to activate the recording function even by pressing the recording (REC) switch, so valuable recordings will not be erased in error.

To re-record on a cassette whose tabs have been broken out, simply stick a piece of doubled adhesive tape over the tab areas, as shown in Fig. C.

NOTE:

The accidental erasure prevention tabs are located at the top left on both sides A and B (1 and 2), so that material on each side can be prevented from being erased in error.

Tips on using cassette tapes

- Leader tape (which does not allow sound to be recorded over it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for approx. 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack.
  Choose a location which is not exposed to the effects of magnetism, dust, dirt and oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit.
  Use tapes of 90 minutes or less.

Fig.A

How to take up tape slack.

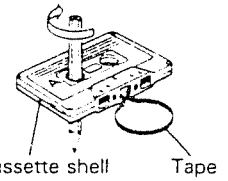


Fig.B

How to prevent already recorded tapes from being erased

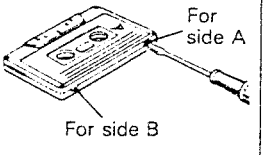
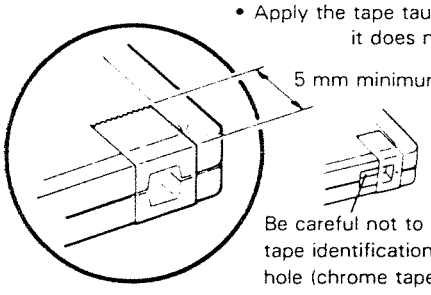


Fig. C

NOTE FOR RE-RECORDING ON A CASSETTE TAPE WHICH HAS A BROKEN TAB

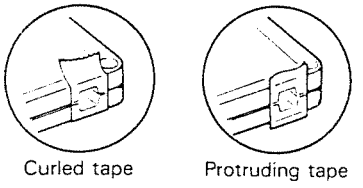
CORRECT METHOD OF APPLYING TAPE

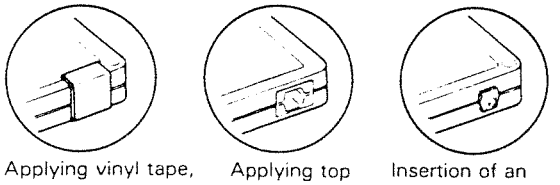
- Apply two layers of cellophane tape.
- Apply the tape tautly so that it does not rise up.



INCORRECT METHOD OF APPLYING TAPE

THIS MAY RESULT IN AN ACCIDENT





Applying vinyl tape, gum tape, or other tape apart from cellophane tape.

Applying top portion only.

Insertion of an eraser or the like.

After removing the cellophane tape, completely wipe away all traces of adhesive. Use only alcohol.

LISTENING TO TAPE

TAPE PLAY (Cassette deck operation)

Tapes may be played back in deck I or deck II but not in both decks at the same time.

1. Press EJECT switch ⑱/⑲ and load a recorded tape, then close the cassette door.
2. Set the DOLBY NR switch ⑯ to the same position used for recording.
3. Press PLAY switch (► or ◄) ⑭/㉓.
   Press PLAY switch of the loaded deck.
4. To stop playback, press STOP switch (■).
5. To remove the tape, press EJECT switch.

Auto Stop Mechanism

This mechanism automatically stops the tape when the end of the tape is reached during FAST forward or reverse (◄◄ or ►►).

RELAY PLAYBACK

Relay playback is possible from DECK I to DECK II, or from DECK II to DECK I. When playback ends on one deck, the other deck automatically starts playing.
Be sure to load tapes into both decks. Relay play is not possible if only one tape is loaded.

- Relay playback is repeated as follows:

DECK I forward play (►) → DECK I reverse play (◄) → DECK II reverse play (◄) ← DECK II forward play (►) ←

1. Load the playback tapes into DECK I and DECK II.
2. Set DOLBY NR switch ⑯ to the same position used for recording.
3. Press the appropriate PLAY switch (► or ◄) on DECK I or DECK II.
4. To stop relay playback, press STOP switch (■) of the operating deck.

Auto Stop Mechanism

Press the ► switch and both sides of the tape will play six times before it stops. Press the ◄ switch and side B will play six times and side A will play five times before it stops.

NOTE:
When the PLAY switch of one deck is pressed while the other deck is in playback mode, the former stops and the latter starts playback.

The deck is equipped with auto-reverse, for example, playback is performed in the ► direction until the tape ends, when it automatically starts playback in the ◄ direction.

NOTE:
- *If the power is switched off while the tape is running, you may not be able to open the door. In this case, switch on the power again and press the EJECT switch once more.*
- *Confirm that the deck has stopped operating before pressing the EJECT switch.*

RECORDING ONTO A TAPE

Material can be recorded on DECK II only. Recording is not possible on DECK I.
- Use a normal or chrome (high position) tape.
- Recording level is adjusted automatically.
- Make sure that there is no tape slack.
- Make sure the accidental erasure prevention tabs on the tape in DECK II have not been broken off.

This deck is equipped with auto-reverse, so if you record in the ► direction, when recording finishes in that direction it will start recording in the ◁ direction. If you only want to record on one side of the tape, record in the ◄ direction, or break off the accidental erasure prevention tab on the side you don't want to record on.

NOTE:
A leader tape having a length equivalent to approx. 5 seconds is attached to an ordinary cassette tape. This means that for two-way travel of the leader tape there will be a break of approx. 12 seconds in the sound. Be very careful of this, particularly when making a two-way recording.

Tape-to-tape recording 1 (Tape copy)

If a tape recorded with the DOLBY NR system is copied, the copied tape will also be recorded automatically with the DOLBY NR system. If a tape recorded without the DOLBY NR system is copied, the copied tape will also be recorded automatically without the DOLBY NR system.

1. Press the FUNCTION switch ⑪, and select TAPE.

Even if the function switch is set to another position, tape copying will still proceed. The sound of the program source selected by the FUNCTION switch will be heard through the speakers.

2. Load DECK I with the tape to record from, and DECK II with a tape to record to.
3. Select the DOLBY NR switch ⑯ to the desired position for the playback tape.
4. Press the SYNCHRO COPY switch ㉑.
5. To stop recording, press the STOP (■) switch ⑭/㉓ on either of the decks.

NOTE:
- *If you are using a TV in the vicinity of the unit, noise will be recorded. Either switch off the TV or move it away from the unit.*
- *There is variation in actual tape length even among cassettes of the same length label (C-60, C-90, etc.). Therefore, even if the recording tape is labeled as the same length as the playback tape, it is possible for the recording tape to end first without recording all of the contents of the playback tape.*

Tape-to-tape recording 2 (Tape dubbing)

1. Press the FUNCTION switch ⑪, and select TAPE.
2. Load DECK I with the tape to record from, and DECK II with a tape to record to.
3. Select the DOLBY NR switch ⑯ to the desired position for the playback tape.
4. Press REC/REC (MUTE) (●) switch ㉓.
   • You are now in record standby.
5. Press the PLAY switch ㉓ on DECK II (◄ or ►, depending on which direction you want to start recording in).
   • Recording starts.
6. Press the PLAY switch ⑭ on DECK I (◄ or ►, depending on which direction you want to start playback in).
7. To stop recording, press the STOP ■ switches ⑭, ㉓, on both decks.

When performing tape-to-tape dubbing, DOLBY is OFF regardless of the position of the DOLBY NR switch, so be sure to switch DOLBY NR OFF when playing back the recorded tape.

Recording FM/AM broadcasts

1. Press the FUNCTION switch ⑪ and select TUNER.
2. Tune in to your desired station.
3. Load the tape for recording into DECK II.
4. Set DOLBY NR switch ⑯ to the desired position.
5. Press REC/REC MUTE (●) switch ㉓.
   • You are now in record standby.
6. Press the appropriate PLAY (◄, ►) switch ㉓.
7. To stop recording, press STOP (■) switch ㉓.

BEAT CUT switch

Beat may occur and be included in recordings of AM broadcasts. In such cases, set BEAT CUT switch on the rear panel to the position of which beat is less.

Recording from CD to tape

This is an explanation of manual CD-to-tape recording. For details concerning automatic CD-to-tape recording with A.S.E.S. (Auto Synchro Editing System).

1. Press the FUNCTION switch ⑪ and select CD.
2. Load the CD.
3. Load the tape for recording into DECK II.
4. Set the DOLBY NR switch ⑯ to the desired position.
5. Press the CD PAUSE (II) switch ⑫ and then press the CD PLAY (►) switch.
   • The CD is then in the PAUSE mode.
6. Press the REC/REC MUTE (●) switch ㉓.
   • You are now in record standby.
7. Press the appropriate PLAY (◄, ►) switch ㉓.
8. Press the CD PAUSE (II) switch ⑫ or the CD PLAY (►) switch ⑫.
   • CD pause mode is canceled and play begins.
9. To stop recording, press the STOP (■) switch ㉓

Recording sound from component connected to the VIDEO jacks to tape.

1. Press FUNCTION switch ⑪ and select VIDEO.
2. Load the tape for recording into DECK II.
3. Set DOLBY NR switch ⑯ to the desired position.
4. Press REC/REC MUTE (●) switch ㉓.
   • You are now in record standby.
5. Press the appropriate PLAY (◄, ►) switch ㉓.
6. Start play of the component connected to the VIDEO jacks.
7. To stop recording, press the STOP (■) switch ㉓.

Using REC MUTE

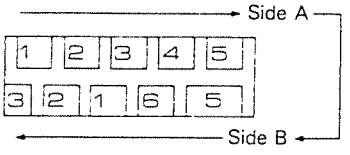
Press the REC/REC MUTE (●) switch again while recording and it acts as a REC MUTE switch. Nothing will be recorded if you continue to press it.
When you release it, you go to the REC PAUSE mode.

NOTE:
You can not use REC MUTE during A.S.E.S operation or when copying a tape.

A.S.E.S. (Auto Synchro Editing System)

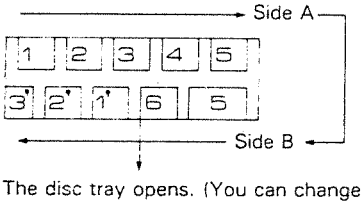
For automatic recording of a CD to a cassette tape.
- Recording starts from the forward (►) direction.
- When recording on both sides, and the tape ends in the middle of a track in the forward (►) direction, recording starts from the beginning of the track when it continues in the reverse (◄) direction.
  If the available tape time exceeds the playing time of the CD, to continue recording from the start of the CD again, select the FULFILL mode. If you select the LINK mode, when a CD ends, you can change it before resuming recording.

FULFILL: If CD play ends before the tape, recording continues from the beginning of the CD again until the tape is full.



- The numbers are the CD track numbers.

LINK: If the CD ends before the tape, DECK II temporarily stops recording, and the disc tray opens. You can then change the disc before resuming play.



The disc tray opens. (You can change discs).

1. Load the CD.
2. Load the tape for recording into DECK II.
3. Set DOLBY NR switch ⑯ to the desired position.
4. Press the ASES switch ⑰.
   - If you want FULFILL Press the ASES switch once.
   - If you want LINK.. Press the ASES switch twice.

1. The cassette tape for recording is rewound to the beginning.
2. Recording on the cassette tape begins in the forward direction.
3. CD playback begins.
4. When one side is recorded, the CD player section is set to the pause mode.
5. Recording on the cassette tape begins in the reverse direction.
6. Playback of the CD will resume from the beginning of the track where it was paused.

When the disc tray opens in the LINK mode:

Exchange the CD and press the CD PLAY (►) switch ⑫. Recording resumes in the A.S.E.S. mode.

To stop A.S.E.S. during recording:

Press DECK II's STOP ㉓ switch or press the CD STOP switch ⑫.

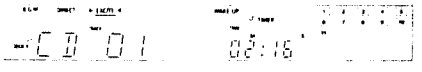
CHANGING DISPLAYS

The display mode in the display section can be changed for each function with the DISPLAY switch 24.

Illustration shows U.K. model.

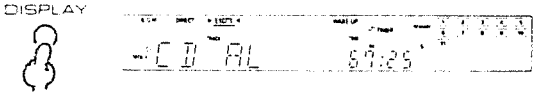
During CD play

[1] Displays track number and elapsed time of the track playing.

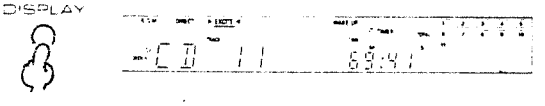


[2] Displays track number and remaining time of the track playing.

[3] Displays remaining time until the end of the disc.

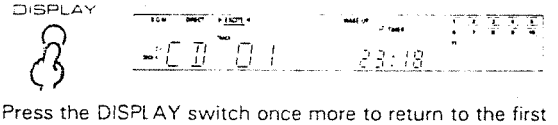


[4] Displays total track number and total time.



(After about five seconds, the display returns to the first display)

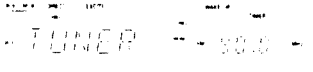
[5] Current time display.



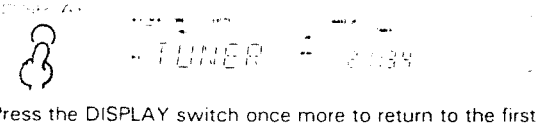
Press the DISPLAY switch once more to return to the first display.

During broadcast reception

[1] Displays reception band and frequency.



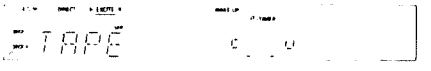
[2] Current time display.



Press the DISPLAY switch once more to return to the first display.

During tape playback

[1] Displays DECK I and DECK II operations and tape direction. (Pause is only displayed for DECK II).



[2] Current time display.

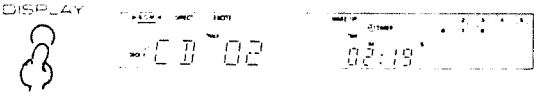
Press the DISPLAY switch once more to return to the first display.

When the function is VIDEO, pressing the DISPLAY switch does not change the display. (Current time is displayed).

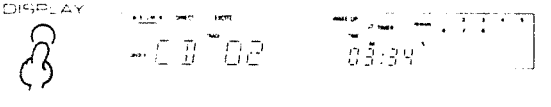
When recording a CD on DECK II

[1] Displays elapsed recording time.

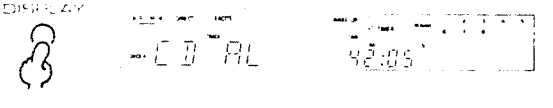
[2] Displays track number and elapsed time of the track playing.



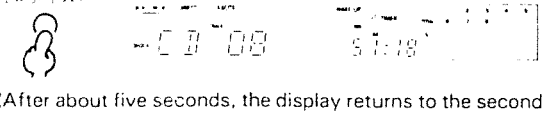
[3] Displays track number and remaining time of the track playing.



[4] Displays remaining time until the end of the disc.

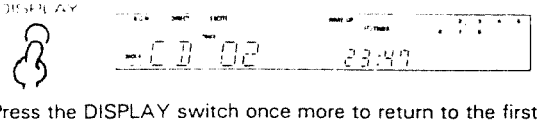


[5] Displays total track number and total time.



(After about five seconds, the display returns to the second display)

[6] Current time display.



Press the DISPLAY switch once more to return to the first display.

ADJUSTING THE SOUND (SOUND CHARACTER)

Select one of the three SOUND CHARACTER settings (B.G.M., DIRECT, EXCITE) by pushing switch ⑦.

B.G.M.: Gives you a wide sound with lowered bass and treble response.

DIRECT: This lets you enjoy sound from a source that has not been affected by sound quality adjusting circuitry. Ideal when you want to listen to pure sound of a CD.

EXCITE: This boosts bass and treble to deliver a powerful, more dynamic sound.

MEMORIZING YOUR USUAL LISTENING SETTINGS (SMART OPERATION)

This function lets you recall your usual listening settings (usual operation switch and knob settings) at the push of a switch.
Such settings as FUNCTION, SOUND CHARACTER, and VOLUME can be memorized.

Programming the memory
(See page 5, Fig. 11)

1. Select the appropriate settings to be memorized.
2. Press the MEMORY switch ④.
   The display of the various settings to be memorized will flash.
3. Press one of the two memory switches, A or B ④ within five seconds. A SET or B SET will be displayed.
4. This lights for about two seconds.
5. You return to the original display.
   This completes memory programming.

NOTE:
For tuner settings, the station NO. is memorized when station NO. is lit, and BAND is memorized when it isn't lit.

Recalling the memory
(See page 5, Fig. 12)

1. Press the switch, A or B, for the memory you want to recall.
   A ACT or B ACT is displayed.
2. This lights for about two seconds.
3. Memorized settings flash on the display.
4. Flashing stops after about five seconds.
   This completes memory recalling.

NOTE:
- *If you recall CD or TAPE, play starts automatically. (If tapes are loaded in both DECK I and DECK II, relay play begins on DECK I in the forward direction).*
- *If you recall CD when there is no disc in the disc tray, the disc tray opens.*
- *Memory recall is also possible when power is off.*

TIMER PLAYBACK

A compact disc, cassette tape, or a radio broadcast can be used instead of an alarm clock.
At the preset time, volume rises gradually as playback begins.
Timer playback begins every day at the same time as long as the timer playback mode is not turned off.

Tape playback:
Timer playback is possible with a cassette tape loaded in deck I or deck II.
When tapes are loaded in both decks, playback starts from DECK I.

Compact disc playback:
The disc is played from the beginning when the timer turns the power on.

[Timer setting example] (See page 5, diagram 13)
Using WAKE-UP 2 to play a CD from 6:40 to 8:15.
(Use the same procedure when using WAKE-UP 1)
Operate using the Timer operation switches ③.
Select your desired listening settings.
- When you use procedure 10 without selecting SMART OPERATION, set the FUNCTION, VOLUME, and SOUND CHARACTER for the sound you want when the timer is ON.

Operate when power is on.

1. Press the SET (ADJ) switch.
2. Press the WAKE-UP (–) switch within five seconds.
   - Press once and WAKE-UP 1 is selected.
   - Press twice and WAKE-UP 2 is selected.
3. Press SET (ADJ) switch within five seconds.
4. Use WAKE-UP (–) and REC (+) switches to set the wake-up (ON) hour.
5. Press SET (ADJ) switch.
6. Use WAKE-UP (–) and REC (+) switches to set the wake-up (ON) minute.
7. Press SET (ADJ) switch.
8. If you make no further changes within about five seconds, the OFF time is set as one hour after the ON time.
   To change the OFF time, use the WAKE-UP (–) and REC (+) switches, and then press the SET (ADJ) switch.

9. **Use WAKE-UP (–) and REC (+) switches to set the turn off minute, and press SET (ADJ) switch.**

When you use SMART OPERATION, the volume level at wake-up time is not the same as the volume level that was set with SMART OPERATION. The volume level corresponds to the level set when you performed the operations mentioned in the section called "Memorizing your usual listening settings".

10. **If you make no further changes within about five seconds, operations displayed are set.**

When the ✻ mark is displayed, the initial settings for function, VOLUME and SOUND CHARACTER are memorized.
To make changes, select SMART OPERATION A or B with the WAKE-UP (–) and REC (+) switches.

11. **Press SET (ADJ) switch.**

- This completes timer setting.
- Timer settings are displayed in order.

[To activate the wake-up timer]

12. **Press WAKE-UP (–) switch, and WAKE-UP 1 or WAKE-UP 2 will light in the display.**

Press once for WAKE-UP 1
Press twice for WAKE-UP 2

- Power is switched off automatically.
- [1] or [2] flash for about five seconds and then light.
- Depending on the function selected for timer playback, a tape or CD will play.

To check timer settings

1. **Press SET (ADJ) switch.**
2. **Press the WAKE-UP switch within five seconds.**
   - Press once to select WAKE-UP 1.
   - Press twice to select WAKE-UP 2.
3. **After five seconds, display changes to the check mode, and timer settings are displayed in order.**

Turning timer on and off

After entering the timer settings, check the display section to confirm which timer is on. The one that is lit (WAKE-UP [1] or [2]) is the one that will be executed.
If you press a WAKE-UP switch to turn off the indication, then the timer will not operate. However, since the settings remain stored in memory, you can press the switch again to reactivate the timer.

- Depending on the function selected for timer playback, a tape or CD will play.

About the SNOOZE function

After timer playback begins, you can press the remote control unit's SNOOZE key to stop the WAKE-UP timer. It begins operating again after about five minutes.

NOTE:
Power will stay off and play will not resume after 5 minutes if SNOOZE key is pressed when there is less than 5 minutes time remaining in the timer setting.

If you make a mistake when setting the timer

Perform setting operations once more. Press SET (ADJ) switch to advance to the end of the procedure.

SLEEP TIMER — Automatically turns off power.

Power is turned off automatically after your set time has elapsed.
When the sleep timer operates, the display section becomes less bright. (Dimmer function)
Each time you press the SLEEP key, the setting changes in the sequence shown here.

[During CD playback, tape playback or tape recording]

→ Auto → 90 min. → 60 min. → 30 min. → 00 (OFF) →

AUTO: Power is switched off when the CD ends or when tape playback or tape recording ends.

[When a CD isn't playing, or when a tape isn't playing or recording]

→ 90 min. → 60 min. → 30 min. → 00 (OFF) →

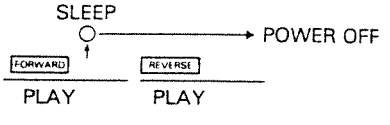
Press the SLEEP key once during sleep timer operation and the remaining time for the sleep timer is displayed.

AUTO SLEEP

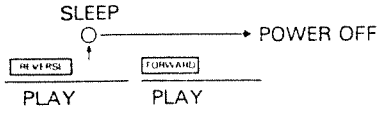
If you press the SLEEP key during CD play or TAPE playback, AUTO SLEEP is switched on. When CD play or tape playback finishes, power is automatically switched off.

When there is a tape in either DECK I or DECK II

- If you press the SLEEP key during forward play, when forward play finishes, reverse play starts. When reverse play finishes, power automatically switches off.

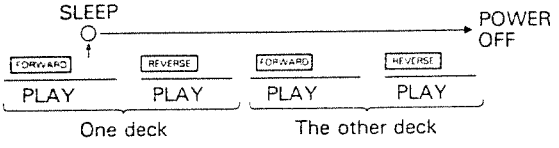


- If you press the SLEEP key during reverse play, when reverse play finishes, forward play starts. When forward play finishes, power is automatically switched off.

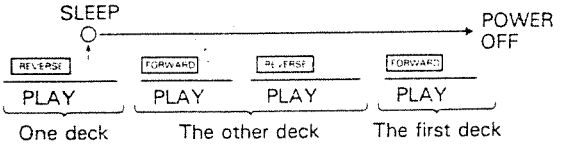


When there are tapes in both DECK I and DECK II

- If you press the SLEEP key during forward play, when forward play finishes, reverse play starts. When reverse play finishes, forward play starts on the other deck, followed by reverse play. When reverse play finishes, power is automatically switched off.



- If you press the SLEEP key during reverse play, when reverse play finishes, forward play starts on the other deck, followed by reverse play. When reverse play finishes, forward play on the first deck starts. When forward play finishes, power is automatically switched off.



TIMER RECORDING

This allows unattended recording of radio broadcasts.

- The timer recording mode is deactivated after it has been performed once.

NOTE:

- *Check to see that the cassette's accidental erasure prevention tabs have not been removed.*

[Timer setting example] (See page 6, Fig. 14)

ST 3 is recorded from 6:40 to 8:15.

Operate using the Timer operation switches ③.

1. **Load the tape for recording into DECK II.**
   Timer recording begins in the forward direction (►) so be careful which way you put in the tape.
   This unit is set to record in both directions, so it also records in the ◄ direction. If you don't want to record on a reverse side, be sure to break off the appropriate cassette tape accidental erasure prevention tab.
2. **Set DOLBY NR switch ⑯ to the desired position.**
3. **Press SET (ADJ) switch.**
4. **Press REC (+) switch within five seconds.**
5. **Press SET (ADJ) switch within five seconds.**
6. **Use WAKE-UP (–) and REC (+) switches to set the recording (ON) hour.**
7. **Press SET (ADJ) switch.**
8. **Use WAKE-UP (–) and REC (+) switches to set the recording (ON) minute.**
9. **Press SET (ADJ) switch.**
10. **If you make no further changes within about five seconds, OFF time is set as one hour after the ON time.**
    To change the OFF time, use the WAKE-UP (–) and REC (+) switches and then press the SET (ADJ) switch.
11. **Use WAKE-UP (–) and REC (+) switches to set the turn off minute, and press SET (ADJ) switch.**
12. **If you make no further changes within about five seconds, the station displayed is set.**
    To make changes, select different station numbers with the WAKE-UP (–) and REC (+) switches.
13. **Press the SET (ADJ) switch.**
    - This completes timer setting.
    - Timer settings are displayed in order.

[To activate timer recording]

14. **Press the REC (+) switch, and REC lights in the display section.**
    - REC lights after flashing for about five seconds.
    - Power is switched off automatically.
    - When timer recording starts, volume is set to minimum.

To check timer settings

1. **Press the SET (ADJ) switch.**
2. **Press the REC (+) switch within five seconds.**
3. **After five seconds have elapsed, display changes to check mode. Timer settings are displayed in order.**

Turning timer on and off

Confirm that REC is lit on the display section.
Timer recording ends after being performed once. However, since the settings remain stored in memory, you can reactivate the timer by pressing the timer REC switch so that REC is lit again.

MAINTENANCE

CLEANING THE HEAD SECTION

The heads, capstan and pinch roller are parts which are liable to become dirty quite easily. In particular, if the heads are dirty, the high frequency components of the sound will not be reproduced and the stereo balance will be impaired, resulting in a deterioration of sound quality. It is therefore recommended that the head section be cleaned regularly.

- Press EJECT switch to open the cassette door.
- Dip a cleaning swab into head cleaning fluid and use it to wipe the head, capstan, and pinch rollers. Wait 2–3 minutes until the cleaning fluid dries.

See diagram [15] on page 6.

① Head ② Capstan ③ Pinch roller

NOTE:

- *This unit uses a head-slant standby system, with the result that the heads are mounted at an angled position.*

DEMAGNETIZING THE HEAD

The recording/playback head becomes magnetized when you use the tape deck for prolonged periods of time. This results in noise being generated and the treble dropping off during recording and playback. The recording/playback head should therefore be demagnetized regularly with a commonly sold head demagnetizer.

For further details, refer to the operating instructions accompanying your head demagnetizer.

NOTE:

- *Do not hold screwdriver, metal objects or magnets close to the heads.*
- *When demagnetizing the heads, be sure the unit's POWER switch is in the STANDBY position.*

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Cassette tape deck amplifier

Symptom	Cause	Remed
There is no power.	• AC cord is unplugged.	• Plug power cord into wall socket.
No sound from speakers.	• Volume is turned all the way down. • Speaker cords are disconnected. • Speaker cords are connected with vinyl insulation still on. • Function is not set to your desired listening source. • Connection cords are not connected or are incorrectly connected.	• Raise volume knob setting. • Connect speaker cords correctly. • Strip vinyl insulation from speaker wire tips before connecting. • Select correct function. • Connect correctly.
Sound from only one speaker.	• One of the speaker cords is disconnected or damaged.	• Connect correctly or replace with new cord.
Cassette door doesn't open. Cassette door doesn't close.	• Deck has not stopped. • Power was switched of while tape was running. • Cassette tape is incorrectly loaded.	• Press the STOP button (■). • Switch on power again. • Reload the cassette tape correctly.
Tape does not move.	• Deck is in pause mode. • Cassette inserted incorrectly.	• Press PAUSE or PLAY switch. • Put cassette properly in holder.
No sound heard from tape.	• Function not set to TAPE. • Playing unrecorded tape.	• Set to TAPE. • Play a recorded tape.
Can not record.	• Erasure prevention tabs are broken off. • Amp recording source selection is incorrect • Dirty head.	• Apply adhesive tape over tab holes. • Select RECORDING ONTO A TAPE. • Clean head.
Previously recorded sounds remain.	• Dirty head.	• Clean head.
Can not copy tape.	• One deck has no tape loaded. • Tape in Deck II has erasure prevention tabs broken off.	• Load tapes in both decks. • Use cassette that can be recorded on, or apply adhesive tape over tab holes.
Sound is muffled and unclear.	• Dirty head. • DOLBY NR system is ON when listening to a tape recorded without DOLBY NR.	• Clean head. • Use same noise reduction system for playback as for recording. (Do not play tapes recorded with different NR systems.)
Treble tones too strong.	• Tape recorded with DOLBY NR but played without.	• Play in same condition as recording. (Turn on DOLBY NR switch for recorded tapes with DOLBY NR.)
Strange sounds heard (or recorded from) tape, CD, or radio.	• TV is on. • The unit is too close to TV.	• Turn off TV. • Move TV away until interference stops.

Symptom	Cause	Remedy
No AM reception.	• Antenna not connected. • Wrong radio band. • Station not tuned in.	• Connect antenna correctly. • Set to desired radio band. • Tune in station.
Beat noise heard.	• TV is on. • Loop antenna position bad.	• Turn off TV or move TV away. • Change loop antenna position.
Noise heard.	• Interference from nearby fluorescent light, hair dryer, or other electrical appliance.	• Stop using device causing interference.
Sound is distorted.	• Antenna in poor position. • Broadcast is weak. • Interference from other electrical devices or multipath reception.	• Change antenna position. • Use external antenna. • Change antenna position.
There is no stereo sound.	• Broadcast signal is weak, antenna input is insufficient.	• Change to a multi-element external antenna.

Remote Control Unit

Remote control does not work.	• Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window.	• Insert new batteries. • Use within seven meters and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle.

Clock and Timer

No time indication.	• There was a power outage. • AC plug was pulled.	• Set time again. • Set time again.
Timer does not work.	• Current time is not set. • Start and/or stop time is not set. • Timer is not on.	• Set current time. • Set ON and OFF times. • To use timer, press the timer selector switch so that the timer display lights.

Abnormal functioning of this unit may be caused by lightning, static electricity, or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.

SPECIFICATIONS

Amplifier Section

Continuously Average Power Output is 18 Watts* per channel, min., at 8 ohms from 40 Hertz to 20,000 Hertz, with no more than 0.4 % total harmonic distortion.

* Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers.

Music power (DIN) ..... 35 W + 35 W
Continuous Power Output (DIN) ..... 25 W + 25 W
(1 kHz, T.H.D. 1%, 8 Ω)
[Multi-voltage model]
Music power ..... 50 W + 50 W
Peak music power ..... 270 W
Hum & Noise (DIN, continuous Power/50 mW)
..... 68 dB/60 dB
Total Harmonic Distortion
(40 Hz to 20,000 Hz, 12.5 W, 8 ohms)**VIDEO
..... No more than 0.2%

FM/AM tuner section

FM Tuner Section

Frequency range ..... 87.5 MHz to 108 MHz
Usable Sensitivity... Mono: 12.8 dBf, IHF (1.2 μV/75 ohms)
Sensitivity (DIN) ..... Mono S/N 26 dB: 0.8 μV/75 Ω
Stereo S/N 46 dB: 31.5 μV/75 Ω
Signal-to-Noise Ratio (IHF, 85 dBf Input) .... Mono: 74 dB
Signal-to-Noise Ratio (DIN) ..... Mono: 64 dB
Stereo: 61 dB
Distortion ..... Stereo: 0.4 % (1kHz)
Stereo separation ..... 40 dB (1kHz)
Antenna Input ..... 75 ohms unbalanced

MW (AM) Tuner Section

Frequency Range
With 10 kHz step ..... 530 kHz to 1,700 kHz
With 9 kHz step ..... 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 250 μV/m
Antenna ..... Loop Antenna

Cassette Deck Section

Systems ..... 4 track, 2-channel stereo
Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor ..... DC servo motor x 2
Wow and Flutter ..... No more than 0.09 % (WRMS)
Frequency Response (– 20 dB recording):
CrO_2 tape ..... 35 Hz to 15,000 Hz ± 6 dB
Signal-to-Noise ratio
Dolby NR OFF ..... 56 dB (EIAJ)
Noise Reduction Effect
Dolby B type NR ON ..... More than 10 dB (at 5 kHz)

CD Section

Type ..... Compact disc digital audio system
Signal to Noise ratio ..... 98 dB or more (EIAJ)
Dynamic range ..... 92 dB or more (EIAJ)
Wow and flutter ..... Limit of measurement
(± 0.001% W.PEAK) or less (EIAJ)

Miscellaneous

Power requirements
U.K. and Australian model.. a.c. 240 Volts ~, 50/60 Hz
Multi-voltage models
... AC 110/120 – 127/220/240 V (switchable), 50/60 Hz
U.S. and Canadian models ..... AC 120 V, 60 Hz
Power Consumption
U.S. and Canadian models ..... 77 W, 140 VA
Other destination models ..... 170 W
Dimensions ..... 300 (W) x 255 (H) x 246 (D) mm
11-13/16 (W) x 10-1/16 (H) x 9-11/16 (D) in
Weight (without package) ..... 7.1 kg (15 lb 11 oz)

Furnished Parts

Operating Instructions 1
Remote Control Unit 1
Dry Cell Batteries 2
FM T-type antenna 1
AM loop antenna 1

SPEAKER SYSTEM: S-P500

Enclosure ..... Book-shelf style, Bass reflex type
System ..... 2-way 2-speaker system
Loudspeakers:
Woofer ..... 12 cm cone type
Tweeter ..... 6.6 cm cone type
Frequency Range ..... 55 to 20,000 Hz
Input Impedance 8Ω
Sensivity ..... 86.5 dB/W at 1 m distance
Music Power (DIN) ..... 45 W
Dimensions ..... 160 (W) x 280 (H) x 210 (D) mm
Weight ..... 3.0 kg

SPEAKER SYSTEM: S-P500D

Enclosure ..... Book-shelf style, Bass reflex type
System ..... 2-way 2-speaker system
Loudspeakers:
Woofer ..... 12 cm (5 in) cone type
Tweeter ..... 6.6 cm (2-1/2 in) cone type
Frequency Range ..... 50 to 20,000 Hz
Input impedance 8Ω
Sensivity ..... 84 dB/W at 1 m distance
Maximum power ..... 45 W
Dimensions ..... 160 (W) · 280 (H) · 215 (D) mm
6 5/16 (W) · 11 (H) · 8-7/16 (D) in
Weight ..... 3.0 kg
(6 lbs 10 oz)

- *Specifications and design subject to possible modification without notice due to improvement.*

** *Measured By Audio Spectrum Analyzer.*

Published by Pioneer Electronic Corporation
Copyright © 1990 Pioneer Electronic Corporation
All rights reserved

PIONEER ELECTRONIC CORPORATION 4-1 Meguro 1-Chome Meguro-ku Tokyo 153 Japan
PIONEER ELECTRONICS [USA] INC. 2265 East 220th Street Long Beach California 90810 U.S.A.
P.O. BOX 1720 Long Beach California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive Markham Ontario L3R 8E3 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1 2740 Beveren Belgium TEL 03/750 05 11
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road Braeside Victoria 3195 Australia TEL [03] 580-9911

<90E07FF6C04>
Printed in Japan <ARB1231-C>